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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/559,504 | 04/27/2000 | KEVIN G DONOHOE | 11675.183 | 2135 |

7590 09/09/2003

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EXAMINER

GOUDREAU, GEORGE A

ART UNIT PAPER NUMBER

1763

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | |
|--------------------------------------|--------------------------------------|
| Application No. 09-559,504 | Applicant(s) Donohoe et al |
| Examiner George Goudreau | Group Art Unit 1763 |

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 6-13-03 (Ce. - paper #10)
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1, 3-16, 18-31, 33-36, 38-43, 45-49 is/are pending in the application.
- Of the above claim(s) 7, 20, 48 is/are withdrawn from consideration.
- ☒ Claim(s) 14-15, 18, 21-31, 33-34, 36, 38, 40-43, 45, 47, 49 is/are allowed.
- ☒ Claim(s) 1, 3-6, 9-13, 16, 19, 35, 39, 46 is/are rejected.
- ☒ Claim(s) 8 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____.
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

1. Claims 6, 16, 19, 35, 39, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-Claims 6, 19, 35, 39, and 46 conflict with the claims upon which they depend. (These claims recite that the etch stop layer is Si₃N₄, while the claims upon which they depend recite that the etch stop layer is a refractory metal nitride layer).; and

-Claim 16 unfairly broadens the scope of the claim upon which it depends. (Claim 16 recites that the etch stop layer is a nitride compound while claim 14 recites that the etch stop layer is a refractory metal nitride layer.)

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3-6, and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et. al. as applied in paragraph 20 of the previous office action.
5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et. al. as applied in paragraph 19 of the previous office action.
6. Claims 14-15, 18, 21-31, 33-34, 36, 38, 40-43, 45, 47, and 49 are allowed.
7. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. Claims 7, 20, and 48 were previously withdrawn from further consideration by the applicant. These claims recite that the etch stop layer is comprised of a doped oxide layer which now conflicts with the claims upon which they depend which recite that the etch stop layer is comprised of a refractory metal nitride layer. These withdrawn claims should be now be canceled by the applicant due to the potential 112 2nd paragraph issues which they now raise.
9. Applicant's arguments filed 6-13-03' have been fully considered but they are not persuasive.

Applicant argues the following points regarding the examiner's rejection of their claimed subject matter.

-Tang et. al. can no longer be used to reject claim 13 based upon applicant's amendment to this claim which now requires that the etch stop layer be a refractory metal nitride layer.; and

-Yang et. al. cannot be used to reject applicant's claims based upon the fact that Yang et. al. recitation of cyclic strained compounds for their etch enhancing compound represents a small subset of all of the possible compounds which can be used for this purpose in applicant's claims.

The examiner must disagree.

-Claim 13 recites that the etch stop layer is comprised of Si₃N₄, and not a refractory metal nitride layer as is purported by the applicant. The previous rejection of claim 13 over the Tang et. al. is therefore still valid since applicant has failed to amend around this claim as applicant purports.; and

-The fact that Yang et. al. teaches the usage of a small subset of compounds which may be used as applicant's etch enhancing compound is irrelevant as to whether applicant's claims may properly be rejected over this reference. (Yang et. al. as applied by the examiner teaches all of applicant's claimed limitations.)

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner George A. Goudreau whose telephone number is (703) -308-1915. The examiner can normally be reached on Monday through Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Examiner Gregory Mills, can be reached on (703) -308-1633. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) -306-3186.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) -308-0661.


George A. Goudreau/gag

Primary Examiner
AU 1763